

IN THE SPECIFICATION:

Please replace the abstract of the disclosure with the following amended paragraph:

--A data communication system apparatus (a) determines a segment size and a segment data size in accordance with a size of a receiving buffer of a destination node, the size of the receiving buffer being determined by the destination node in accordance with a maximum payload size that can be received by the destination node, (b) divides object data into segments in accordance with the segment size, and (c) divides each segment into a plurality of segment data in accordance with the segment data size. The data communication apparatus (c) generates packets from the plurality of segment data, and (d) transfers the packets from the data communication apparatus to the destination node via a logical connection set between the data communication apparatus and the destination node, the logical connection being set by a controller and a communication protocol are implemented by connecting the source node and one or more destination nodes logically, and controlling the data communication between each of the nodes by use of the connection ID whereby to identify such logical connection relationship. Also, for the data communication using the logical connection relationship, a communication system and a communication protocol are implemented by setting optimally the size of each packet transferred by the source node sequentially and the size of the reception buffer of each destination node even when the reception capability of each of the destination nodes is different.--